

ORIGINAL RESEARCH**Role of Socratic Questioning in Improving Critical Thinking skills among Nursing Students****¹Vijayalakshmi Gopalan Nair, ²Shanthi Ramasubramaniam**¹Principal, Sardar Lal Singh Memorial Institute of Nursing, Desh Bahagt University, Punjab, India²Clinical Practice Facilitator, South Mead Hospital, North Bristol, NHS Trust England**Correspondence:**

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Email: principal.slmin@deshbhagatuniversity.in**Introduction**

“A vital question among the present nurse educators is, to stimulate students’ meta-cognition an approach to critical thinking that involves questioning one’s thought processes and thereby to enhance their critical thinking what educational strategies can be used?”

More than few decades, nursing educators and scholars have been advocating for quality nursing education that includes greater intellectual stimulation throughout the curriculum. This has put the spotlight on pedagogic or teaching methods that strengthen students’ critical thinking ability during their learning process (Kantar LD., 2014; Shirazi F, Heidari S, 2019). However, this paradigm shift towards educating for meta-cognitive thinking presents practical challenges for the nurse educators.

To provide appropriate answer to this question, we can refer to the methods recommended by the ancient Greek philosopher and teacher Socrates. Socrates was an early proponent of the application of meta-cognitive understanding within the academic setting. (Tanner KD, 2014) Numerous scholars have explored the correlation between meta-cognitive thinking and critical thinking (Halpern DF., 1998; Kuhn D, 2004) According to Magno 2017, meta-cognition is positively correlated with critical thinking, and its application within a process of Socratic inquiry generates more effective critical thinking skills.

In this context, it can be said that nursing students who engage in meta-cognitive processes tend to be more critical of their practices and views and are more likely to question their assumptions. To foster critical thinking in nursing students, educators need to help them engage in deeper thinking processes. As such, using Socratic inquiry within the classroom setting can serve to enrich student nurses’ critical thinking approaches as they embark on their learning journey.

The origins of Socratic inquiry

The Greek soldier, educator, and philosopher Socrates lived in Athens during the “Golden Age” of the 5th century BC (Knezic D, Wubbels T, Elbers E, Hajer M., 2019). Although it appears that Socrates himself left no record of his thoughts and teachings, detailed accounts were kept by his students and followers, including Plato, Xenophon, and Aristophanes. Most famously, he taught through a process of dialogue, asking questions that encouraged his followers to gain understanding and mastery of a given topic. Schiller summarizes the Socratic Method as follows (Schiller N., 2008) “He asked questions, letting the other man do most of the talking, but keeping the course of the conversation under his control, and so

would expose the inadequacy of the proposed definition. The other would fall back on a fresh or modified definition, and so the process would go on, with or without final success.” Therefore, in the Socratic Method, educators encourage and train students to extract data through an iterative process of exploration and analysis. When properly and sensitively used, Socratic inquiry has an important place alongside other pedagogic strategies in nursing education and can enhance learning outcomes by allowing students to actively self-learn and improve their critical thinking abilities.

Applying Socratic inquiry to aid critical thinking among nursing students

The core of the questioning is that the nurse educator/ faculty should begin an inquiry by asking open-ended questions. When the student answers, follow-up questions should encourage investigation of the unspoken beliefs and assumptions that underlie the initial answers. The teacher’s response should guide students toward deeper understanding. The teacher should encourage students to express any and all connections made, so students understand that all thoughts are connected to extant beliefs, knowledge, experiences or assumptions.

It is recommended that students receive assignments to be completed before class, so they arrive prepared for discussion. Furthermore, teachers should preface their questions with “why,” as they can evaluate the extent of a student’s critical thinking by hearing the student state the principles underlying any “because” answer.

Educators must also frame questions to guide students toward their own discovery at which point students should reformulate their original proposition. Educators can also ask students to check the truth of an assertion by applying it to their own experience, and encourage them to realize the limitations of generalizations.

Within Socratic inquiry, the educator must avoid offering answers to questions asked, as this hinders students in learning to apply reason and method to their own thought processes, formulating criteria, and making the judgments necessary to question claims made by others.

Moreover, the questions asked by the educator should be investigative and sources of any given problem, helping students identify fundamental elements and their evolution. Students must learn not only to think clearly but also to express their thoughts clearly and understand others. Listening is the key element that would enhance the whole process.

Moreover, the teacher must spend considerable time formulating the initial and follow-up questions that will guide the students’ path of inquiry, and have the skills needed to facilitate class discussion. If these conditions are present, the benefits are considerable: Students will learn to identify, expose, and evaluate the assumptions and beliefs that underpin their own and others’ statements. Furthermore, students will be able to base their judgments on reason while considering all contrary experiences, assertions, beliefs, and paradigms, which will help nurses to enhance their critical thinking and provide good quality of care.

Applying Socratic inquiry in virtual learning environments

Due to the global COVID-19 pandemic, the traditional classroom teaching took its direction towards virtual learning; it is pertinent to determine how Socratic inquiries can be undertaken in virtual learning environments. In terms of online teaching, two key elements serve as the foundation for undertaking Socratic inquiries when teachers and students are physically separated (Makhene A, 2019) First, Socratic inquiry requires a student to be engaged in a dialogue that involves solid evidence. Second, students will only become insightful if, at every stage of the Socratic dialogue, explicit links are forged between statements and personal experiences. A digital learning platform (such as, Moodle or Blackboard) should be employed, where integral features allow students to offer responses at particular stages of a prerecorded Socratic dialogue.

The chief aim of Socratic inquiry within education is not to find answers to questions that may appear unanswerable but to help students develop critical thinking by exploring the various elements of the answers provided and how they are justified. In doing this, students are encouraged not to simply memorize set facts but to think about how they can be applied to develop critical thinking in problem-solving. One example might be that the instructor could ask students to clarify their thinking by asking, "What is the relationship between frequent change of position and prevention of bed sore?" A question that asks students to show evidence and reasoning capacity might be, "What evidence do you have that bed sore is an outcome of poor nursing care?" Paul and Elder, 2016 contend that with Socratic inquiry, there can generally be a multiplicity of correct answers and, frequently, no specific answer arises.

Educators must understand that the dialogue's purpose is to strengthen students' cognitive abilities and not expose their weaknesses. (Makhene A, 2019)

Scholars have already advocated using Socratic inquiry in healthcare education. Kost A, Chen FM, 2015 Zou and King, 2011 surveyed 74 radiology students, most of whom were enthusiastic that their educators adopt a Socratic approach over a didactic one (93.3% versus 6.7%, respectively, $P < .001$). This implies that students are more engaged by active learning strategies. Similarly, Rogge, 2001 found that when pathophysiology professors combined seminars investigating case studies through Socratic dialogue with more formal lectures, the latter represented teaching-learning as a partnership between students and teachers.

Conclusion

All had the power to learn, and, to put it in Socrates' words, "the instrument with which each learner is like an eye that cannot be turned around from darkness to light without turning the whole body." (Plato, 1992)

Socratic inquiry, if properly used, can show that decisions are usually conscientiously made and emanate from particular premises, beliefs and conclusions that are the subject of justified argumentation. Students will learn to discover the structure of their thoughts and to develop sensitivity to clarity, accuracy and relevance. It also assists them to arrive at judgments based on their own reasoning, and to note claims, evidence, conclusions, interpretations, implications, concepts and points of view that are considered to be elements of critical thinking. It is further recommended that this teaching methodology should be used both in the classroom and clinical context to facilitate students' critical thinking skills.

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